Claims

1. An antagonist of glucose-dependent insulinotropic polypeptide (GIP) consisting essentially of a 24 amino acid polypeptide corresponding to positions 7-30 of the sequence of GIP.

2. An antagonist of glucose-dependent insulinotropic polypeptide (GIP).

3. An antagonist according to claim 8, wherein said antagonist comprises at least an effective number of amino acids corresponding to those amino acids in posts 7-30 of the sequence of GIP or effective alternative sequences thereto.

4. An antagonist according to claim 8, wherein said antagonist comprises a 24 amino acid polypeptide corresponding to positions 7-30 of the sequences of GIP or effective alternative sequences thereto.

5. A pharmaceutical composition for preventing, inhibiting or reducing obesity in an animal comprising:

an effective amount of an antagonist of glucose-dependent insulinotropic polypeptide (GIP) to inhibit, block or reduce glucose absorption from the intestine of the animal; and

an acceptable pharmaceutical carrier.

12. A pharmaceutical composition according to claim 11, wherein the antagonist comprises at least an effective number of amino acids corresponding to those amino acids in positions 7-30 of the sequence of GIP or effective alternatives thereto.

13. A pharmaceutical composition according to claim 11, wherein the antagonist comprises a 24 amino acid polypeptide corresponding to positions 7-30 of the sequence of GIP or effective alternatives thereto.

14. A pharmaceutical composition according to claim 11, said A pharmaceutical composition further including an inert pharmaceutical excipient selected from the group consisting of sweetening, flavoring, coloring, dispersing, disintegrating, binding, granulating, suspending, wetting, preservative and demulcent agents.

15. An antagonist according to claim 8, wherein the antagonist is lyophilized.

16. An antagonist of claim 15, wherein the lyophilized antagonist is reconstituted with a suitable diluent selected from the group consisting of normal saline, sterile water, glacial acetic acid, sodium acetate and combinations thereof.

18. An antagonist according to claim 8, wherein said antagonist comprises at least an effective number of amino acids corresponding to those amino acids in positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

19. An antagonist according to claim 8, wherein said antagonist comprises a 24 amino acid polypeptide corresponding to positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

20. An antagonist according to claim 11, wherein said antagonist comprises at least an effective number of amino acids corresponding to those amino acids in positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

21. An antagonist according to claim 11, wherein the antagonist comprises a 24 amino acid polypeptide corresponding to positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

22. A polypeptide having an amino acid sequence which specifically interferes with the biological activity of GIP when said polypeptide is administered in an effective amount to an animal.

23. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 7-30 of the sequence of human GIP, SEQ ID NO: 2, or effective alternative sequences thereto.

24. A polypeptide according to claim 22, wherein the polypeptide comprises 24 amino acids in positions 7-30 of the sequence of human GIP, SEQ ID NO: 2, or effective alternative

sequences thereto.

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25. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

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26. A polypeptide according to claim 22, wherein the polypeptide comprises 24 amino acids in positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

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27. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 16-30 of the sequence of human GIP, SEQ ID NO: 3, or effective alternative sequences thereto.

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28. A polypeptide according to claim 22, wherein the polypeptide comprises 15 amino acids in positions 16-30 of the sequence of human GIP, SEQ ID NO: 3, or effective alternative sequences thereto.

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29. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 16-30 of the sequence of rat GIP, SEQ ID NO: 9, or effective alternative sequences thereto.

30. A polypeptide according to claim 22, wherein the polypeptide comprises 15 amino acids in positions 16-30 of the sequence of rat GIP, SEQ ID NO: 9, or effective alternative sequences thereto.

31. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 10-30 of the sequence of human GIP, SEQ ID NO: 5, or effective alternative sequences thereto.

32. A polypeptide according to claim 22, wherein the polypeptide comprises 21 amino acids in positions 10-30 of the sequence of human GIP, SEQ ID NO: 5, or effective alternative sequences thereto.

33. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 10-30 of the sequence of rat GIP, SEQ ID NO: 10, or effective alternative sequences thereto.

34. A polypeptide according to claim 22, wherein the polypeptide comprises 21 amino acids in positions 21-30 of the sequence of rat GIP, SEQ ID NO: 10, or effective alternative sequences thereto.

35. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 21-30 of the

sequence of rat GIP, SEQ ID NO: 13, or effective alternative sequences thereto.

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~~36~~. A polypeptide according to claim 22, wherein the polypeptide comprises 10 amino acids in positions 21-30 of the sequence of rat GIP, SEQ ID NO: 13, or effective alternative sequences thereto.

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~~37~~. A polypeptide according to claim 22, wherein said polypeptide comprises at least an effective number of amino acids corresponding to those amino acids in positions 31-44 of the sequence of rat GIP, SEQ ID NO: 13, or effective alternative sequences thereto.

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~~38~~. A polypeptide according to claim 22, wherein the polypeptide comprises 14 amino acids in positions 31-44 of the sequence of rat GIP, SEQ ID NO: 13, or effective alternative sequences thereto.

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~~39~~. A polypeptide having an amino acid sequence which specifically interferes with the biological activity of GIP when said polypeptide is administered in an effective amount to an animal, said polypeptide comprising at least those amino acids corresponding to positions 7-9 of GIP, SEQ ID NO: 6.

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~~40~~. A polypeptide according to claim 39, wherein the polypeptide comprises 24 amino acids corresponding to positions 7-30 of the sequence of human GIP, SEQ ID NO: 2, or effective alternative sequences thereto.

41. A polypeptide according to claim 39, wherein the polypeptide comprises 24 amino acids corresponding to positions 7-30 of the sequence of rat GIP, SEQ ID NO: 8, or effective alternative sequences thereto.

42. A polypeptide having an amino acid sequence having the ability to signal through a GIP receptor, said polypeptide comprising at least those amino acids corresponding to positions 7-15 of GIP, SEQ ID NO: 4.